IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:
Levy et al
Application No.: 10/028,751
Filed: December 21, 2001
For: WATERMARK AND FINGERPRINT SYSTEMS FOR MEDIA (as amended)
Examiner: Brown, Alvin L
Date: July 20, 2009

Art Unit: 3622
Confirmation No.: 2711

VIA ELECTRONIC FILING

APPEAL BRIEF

Mail Stop: Appeal Brief – Patents
COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Appeal Brief is responsive to the *Notice of Appeal* filed February 10, 2009, and the *Notice of Panel Decision* dated March 20, 2009.

Please charge the fee for the brief to deposit account 50-1071.

I. REAL PARTY IN INTEREST

The real party in interest is Digimarc Corporation of Beaverton, Oregon.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF CLAIMS

Claims 5-7, 9-12 and 22-25 are finally rejected and appealed. (Claims 1-4, 8 and 13-21 are canceled.)

IV. STATUS OF AMENDMENTS

All prior amendments have been entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present subject matter concerns promotional messages in video programs, such as determining whether a user has fast-forwarded or otherwise skipped through such promotional messages.

According to independent claim 5, one aspect of Appellant's technology is a method of delivering video content that includes a fingerprinted or digitally watermarked promotional message.[1] The promotional message interrupts and separates the video content into first and second portions.[2] The method includes sensing the fingerprint or watermark of the promotional message when it is rendered at a user device.[3] If the promotional message is skipped-over to more rapidly reach the second portion of the video content, sensing of the fingerprint or watermark fails; this failed sensing serves to change the terms under which the video content is provided.[4]

According to independent claim 7, another aspect of Appellant's technology is a method of delivering video content that includes a fingerprinted or digitally watermarked promotional message.[5] The method includes sensing the fingerprint or watermark of the promotional message as it is rendered at a user device.[6] Sensing of one or more of the fingerprinted or watermarked messages entitles a user to access other content or capabilities as a reward for having viewed one or more promotional messages.[7]

According to independent claim 9, another aspect of Appellant's technology is a

---

1 See, e.g., specification, page 3, line 13 – page 5, line 17.
2 See, e.g., specification, page 7, lines 8-9.
3 See, e.g., specification, page 3, lines 14-20.
4 See, e.g., specification, page 3, lines 20-23.
5 See, e.g., specification, page 3, line 13 – page 5, line 17.
6 See, e.g., specification, page 3, lines 14-20.
7 See, e.g., specification, page 5, lines 8-9.

method in which video content is received at a user device without paying a proprietor for the content.[8] The video is rendered for viewing, and a fingerprint or digital watermark is detected in the rendered content.[9] This detection triggers a payment to the content proprietor; thus, consideration for the viewing is triggered by the viewing itself, rather than in advance of the viewing.[10]

According to independent claim 10, another aspect of Appellant's technology is a method in which video entertainment content is rendered to a user, and includes promotional content integrated into the entertainment content, rather than interrupting same.[11] A signal is received from a user interaction device, indicating selection of the promotional content during the rendering of the entertainment content.[12] In response to selection, the user is provided additional promotional information related to the selected promotional content.[13] Additionally, the user is provided a reward for receiving this additional promotional information.[14]

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 5, 7, 10-12 and 22-24 are rejected under § 102 as being anticipated by Abecassis (6,553,178).

Claim 6 is rejected under § 103 over Abecassis in view of Itoh (20030206632).

Claim 9 is rejected under § 103 over Abecassis in view of Goldhaber (5,794,210).

Claim 25 is rejected under § 103 over Abecassis in view of Jones (5,978,013).

---

8 See, e.g., specification, page 5, lines 24-25.
9 See, e.g., specification, page 5, lines 25-26.
10 See, e.g., specification, page 5, lines 24-26.
11 See, e.g., specification, page 7, lines 7-8.
12 See, e.g., specification, page 7, line 13.
13 See, e.g., specification, page 7, line 14.
14 See, e.g., specification, page 7, lines 15-16.

VII. ARGUMENT

1. Abecassis (6,553,178)

Like the presently-claimed arrangement, Abecassis involves promotional messages in video programs.

More generally, Abecassis concerns a non-linear video editing system that can be used by a consumer to tailor a video to the user's preferences – skipping unwanted segments of the video (possibly substituting alternate segments), and inserting promotional messages – if desired.

Each segment of the video has one or more associated codes, indicating the segment's content (e.g., bloodshed) – on which a skip (and/or substitute) decision can be based. Segments are identified by their beginning and ending frame numbers (col. 10, ll. 10-13). By such arrangement, for example, a user can arrange to skip scenes of a movie that might be distressing to a child (col. 40, ll. 15-16).

The various segment codes are compiled into a "video segment map" (col. 11, ll. 27-32), which is presented to the user in a graphical interface that is displayed during censoring of a video per the user's tastes (col. 12, ll. 7-10). The video segment map is indicated at 354 in Fig. 3E, which shows the graphical interface presented to the user:

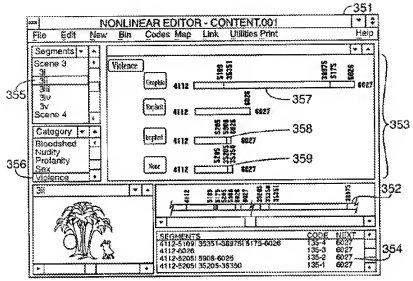

FIG. 3E

The user of Abecassis can opt to include promotional videos (i.e., advertisements) in a video presentation, to receive credit. These credits can reduce the user's monthly video bill (col. 44, l. 58 – col. 45, l. 28).

2. Claim 5 (§102: Abecassis)

Claim 5 reads as follows:

> *5. A method of video content delivery, including providing entertainment video content having a fingerprinted or digitally watermarked promotional message therein, the promotional message interrupting and separating the entertainment video content into first and second portions, and sensing the fingerprint or watermark of the promotional message when the promotional message is rendered at a user device, wherein if the promotional message is skipped over to more rapidly reach the second portion of the entertainment video content, the failed sensing of the fingerprint or watermark serves to change the terms under which the entertainment video content is provided.*

As noted, the user in Abecassis can choose to include advertisements in the video presentation, and receive corresponding credits against the user's monthly video bill –

thus incenting viewing of promotional messages. However, Abecassis does so in a manner different than presently claimed.

For example, Abecassis does not "*[sense] the fingerprint or watermark of the promotional message when the promotional message is rendered at a user device.*"

The Office earlier admitted that Abecassis does not have a watermarked promotional message, nor sensing of same when rendered:[15]

> **6. Claims 5, 7, 9, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abecassis (6,553,178 B2) in view of Collart (6,405,203 B1).**
>
> **As per claim 5,** Abecassis discloses a method to skip advertisement which changes the cost of the video downloaded by the viewer (column 44, lines 48-67; column 39, line 53 - column 40, line 16).
>
> Abecassis does not explicitly disclose a video content having a digitally watermarked promotional message therein, and sensing same when rendered at a user device.
>
> Further, applicant discloses in the background of the invention that watermarking

Thus, the present rejection is understood to rest on an assumption that Abecassis teaches a "fingerprinted" promotional message, with "failed sensing" of the fingerprint changing terms under which the video is provided.

The present specification refers to fingerprints (e.g., page 19, line 13) without expressly defining same. However, the present specification incorporates-by-reference application 09/563,664 (see page 10, line 20 – incorporated by reference at page 19, lines 6-8). Application 09/563,664 (now patent 6,505,160) explains (emphasis added):

> *As noted above, another way to associate an identifier with a corresponding audio signal is to derive the identifier from the signal. This approach has the advantage that the embedding process is unnecessary. Instead, the decoding process can generate the identifier from the audio object. In this case, the decoder computes a fingerprint of*

[15] April 1, 2008, Action, page 3.

the audio signal based on a specified fingerprinting algorithm, The fingerprint is a number derived from a digital audio signal that serves as a statistically unique identifier of that signal, meaning that there is a high probability that the fingerprint was derived from the audio signal in question. One component of fingerprint algorithm is a hash algorithm. The hash algorithm may be applied to a selected portion of a music file (e.g., the first 10 seconds) to create a fingerprint. It may be applied to discrete samples in this portion, or to attributes that are less sensitive to typical audio processing. Examples of less sensitive A attributes include most significant bits of audio samples or a low pass filtered version of the portion. Examples of hashing algorithms include MD5, MD2, SHA, SHA1.

As an aside, fingerprinting may also be used to determine whether an audio signal has been watermarked. The fingerprinting application can evaluate a fingerprint for a received object and compare it with one for a watermarked object (or unmarked object) to determine whether the object is likely to be watermarked. Certain fingerprints can be associated with certain types of watermark methods. Using the fingerprint, a decoding device can select an appropriate watermark decoding system for the object.

While specifically discussed in the context of audio objects, the fingerprinting process applies to other types of multimedia content as well, including still images, video, graphics models, etc. For still images and video, the identifier can be derived dynamically from a compressed or uncompressed version of the image or video signal. The fingerprinting process may be tuned to generate a specific identifier based on the type of file format. For example, the process extracts the file format from the file (e.g., from a header or footer), then uses a fingerprinting process tailored for that type of file (e.g., a hash of a compressed image or video frame). The dynamic identifier computed by this process may be associated with metadata and/or actions using the processes and systems described in this document.

From this, an artisan would understand that a fingerprint is a statistically unique identifier of a signal, derived from the signal itself.

Abecassis does not teach a fingerprint, so does not anticipate.

Nor does Abecassis teach "failed sensing," to change terms under which video content is provided.

Still further, claim 5 requires a "promotional message interrupting…" the content. The Office argues this limitation is met. However, contradictorily, the Office also argues the opposite limitation – found in claim 10 – is met ("content including promotional

content integrated therein, rather than interrupting same"). It is one or the other. Either the limitation in claim 5 is met, or the limitation in claim 10 is met; not both.

Moreover, it will be recognized that the user in Abecassis defines exactly what video content (including advertising) is to be presented – by the user's interaction with the graphical interface of Fig. 3E. If the user intentionally includes advertising, Abecassis presumes the user watches it. No test is made as to whether the user fast-forwards or otherwise skips through commercials in the edited video presentation. (Thus, Abecassis repeatedly refers to the user's "apparent" watching of commercials. See, e.g., col. 1, l. 59; and col. 49, l. 19.)

Because Abecassis does not teach each element of Appellant's claim 5, the rejection should be reversed.

3. Claim 7 (§102: Abecassis)

Claim 7 reads as follows:

> *7. A method of entertainment video content delivery, including providing entertainment video content having plural fingerprinted or digitally watermarked promotional messages therein, and sensing same as the entertainment video content is rendered at a user device, wherein sensing of one or more of said fingerprinted or watermarked messages entitles a user to access other content or capabilities as a reward for the user having viewed one or more promotional messages in the entertainment video content.*

Like claim 5, the rejection of claim 7 fails because Abecassis does not teach digitally watermarked promotional messages (as admitted in the April, 2008 Action), nor fingerprints. (Nor sensing of same.)

The rejection of claim 7 also fails because Abecassis does not teach sensing of one or more fingerprinted or watermarked messages as entitling a user to access other content or capabilities as a reward for "having viewed" one or more such promotional messages.

4. Claim 10 (§102: Abecassis)

Claim 10 reads as follows:

> *10. A method comprising:*
> *rendering video entertainment content to a user, the video entertainment content including promotional content integrated therein, rather than interrupting same;*
> *receiving a signal from a user interaction device indicating selection of the promotional content during the rendering of said video entertainment content;*
> *in response to said selection, providing to said user additional promotional information related to the selected promotional content; and*
> *providing the user a reward for receiving said additional promotional information.*

Unlike the earlier-discussed claims, this claim is silent on watermarking/fingerprinting. Rather, it involves video content "*including promotional content integrated therein, rather than interrupting same.*"

The specification supports this claim limitation by reference to product placement – a Coke in an episode of *Friends:*[16]

> *Another concept is to include connected-ads within (as opposed to interrupting) the entertainment. If someone "clicks" on (or during) the ad, or otherwise activates same, then they receive money towards watching the TV show. If someone doesn't want to click on the ad, they pay for the show. The ads are linked to information via watermarks.*
> *For example, if Ross in the TV show Friends is drinking a Coke during the show, then clicking during that time will present the viewer with linking options, one of which is viewing the web page of Coke. It will be identified that this is an advertising link, possibly with an ad credit symbol such as a $. If the user clicks on this option, they will*

[16] Specification, page 7, lines 6-18.

receive some benefit, such as x cents deducted from their monthly TV bill. Thus, if they want to watch TV without ads, they just don't click on ads and pay more for the monthly TV bill.

The claim also involves "receiving a signal from a user interaction device indicating selection of the promotional content during the rendering of said video entertainment content." In the quoted excerpt, this claim limitation is supported by the user "clicking" during the time that Ross is drinking a Coke.

Abecassis teaches none of this.

If "promotional content integrated therein, rather than interrupting same" is construed to cover examples like Ross and his Coke, then Abecassis is silent re same. (This is consistent with the Office's interpretation of claim 5 – which contends that Abecassis teaches "the promotional message interrupting and separating the entertainment video content into first and second portions.")

Similarly, Abecassis is silent on "receiving a signal from a user interaction device indicating selection of the promotional content during the rendering of said video entertainment content." (The Office cites col. 45, ll. 10-18, in support, but this excerpt does not teach the quoted limitation.)

Again, the art fails to teach each element of Appellant's claim. The rejection should be reversed.

5. Claim 11 (§102: Abecassis)

The rejection of claim 11 over Abecassis stands or falls with the rejection of claim 10 over Abecassis.

6. Claim 12 (§102: Abecassis)

Claim 12 is allowable for its dependence from claim 10, and is also separately patentable. The claim reads:

> *12. The method of claim 10 in which said additional promotional information is provided to the user through a process that makes use of fingerprint or digital watermark information conveyed by said video content.*

As noted in connection with claim 5, Abecassis does not teach a digital watermark, nor a fingerprint.

7. Claim 22 (§102: Abecassis)

Claim 22 is allowable for its dependence from claim 10, and is also separately patentable. The claim reads:

> *22. The method of claim 10 in which said providing includes presenting linking options to the user, and receiving a user selection of one of said options.*

Abecassis is not understood to teach such arrangement.

The Office cites Abecassis at col. 46, lines 1-15, and col. 48, lines 60-67. The former refers to "linkage to a network" (at Fig. 10A). The latter refers to "viewing of an advertisement leads directly to a purchase by the viewer." However, the arrangement defined by claim 22 is not taught.

8. Claim 23 (§102: Abecassis)

Claim 23 is allowable for its dependence from claim 22, and is also separately patentable. The claim reads:

23. The method of claim 22 in which said providing includes conveying data relating to the linking options by one of the group consisting of: digital watermarking, Multicast IP, vertical blanking interval signaling, and file header data.

The Office cites col. 1, lines 44-50 in support of the rejection. However, that passage does not teach the claim limitation. Rather, it states:

> However, with respect to non-interactive entertainment programming, such as motion pictures, video programming concepts remain largely rooted in the primitive traditional linear architectures of celluloid films. Proposed movies-on-demand services, while utilizing a pointcast architecture, largely reflect the broadcast tradition in terms of the video provided.

Again, the rejection should be reversed.

9. Claim 24 (§102: Abecassis)

The rejection of claim 24 over Abecassis stands or falls with the rejection of claim 10 over Abecassis.

10. Claim 6 (§103: Abecassis + Itoh)

Claim 6 is patentable for its dependence on claim 5, and is also independently patentable. The claim reads:

6. The method of claim 5 in which the changed terms include assessing a charge for skipping the promotional message.

The Office cites Itoh for the claimed feature.

Itoh's disclosure is somewhat difficult to understand. However, he appears to assess a time-based charge for viewing entertainment content, and a "privileged" rate (which may be free) for viewing commercials.

If a viewer fast-forwards across an Itoh commercial, the commercial – and its privileged rate – do not seem to be detected.

It appears this has no effect on the charge to the viewer. If the user watches the commercial, no charge is assessed for that time. If the viewer skips the commercial, no charge is assessed for that time either.

The claimed feature thus does not appear to be taught.

(Moreover, the rationale offered by the Office in support of combining Itoh with Abecassis does not meet the Office's burden under §103. For example, it seems premised on the mistaken assumption that Abecassis has a watermark (not so, per the Action mailed April 1, 2008, cited above).)

Again, the rejection should be reversed.

11. Claim 9 (§103: Abecassis + Goldhaber)

Claim 9 reads:

> *9. A method comprising:*
> *receiving video content at a user device without paying a proprietor for the content;*
> *rendering the video content for viewing;*
> *detecting a fingerprint or digital watermark in the rendered video content; and*
> *triggering a payment to said proprietor based on detection of the fingerprint or digital watermark during rendering;*
> *wherein consideration for the viewing is triggered by the viewing itself, rather than in advance of the viewing.*

The Office contends that Abecassis teaches everything in claim 9, except payment to the proprietor.[17] Not so.

As detailed earlier, Abecassis teaches neither detection of a fingerprint, nor detection of a digital watermark.

Moreover, Abecassis does not teach the limitation of the claim's concluding "wherein" clause.

The reliance on Goldhaber does not save the rejection. It is cited for teaching "content supported by revenue received from advertiser."[18]

Two excerpts from Goldhaber are cited. The first (col. 1, line 50 – col. 2, line 12) describes a prior art arrangement (e.g., known from newspapers): advertisers pay content producers to produce content (including their ads), coupled with consumers who also pay. The second (col. 8, lines 59-61) simply notes "The service provided by the present invention can be offered free to the consumer, with the service operator receiving compensation from advertisers."

Neither of the references teaches or suggests detecting fingerprints, or digital watermarks, in rendered video content. Neither of the references teaches or suggests triggering a payment based on detection of a fingerprint/digital watermark during rendering. Neither of the references teaches or suggests consideration for viewing being triggered by the viewing itself – rather than in advance of the viewing.

Moreover, the rationale offered by the Office in support of combining Goldhaber with Abecassis does not meet the Office's burden under §103. It simply states "One would be motivated to do this in order to provider service providers with additional means of earning revenue."

---

17 Final Rejection, page 6, line 1.

But no such motivation exists. Under the prior art, content providers were paid when content is delivered. The claimed arrangement provides payment for the content provider when the content is rendered. No "additional" means of earning revenue is involved. Indeed, the content provider may obtain *less* revenue, not more, since there is no payment when content is delivered (as is normally the case), but only if it is thereafter rendered (which may not occur).

The rejection of claim 9 should be reversed.

12. Claim 25 (§103: Abecassis + Jones)

Claim 25 is allowable for its dependence from claim 10. It is also separately patentable. The claim reads:

> *25. The method of claim 10 that includes displaying an on-screen signal with the rendered entertainment content, to indicate that an opportunity exists for the user to earn credit by viewing additional information.*

The Office seems to offer contradictory characterizations of Abecassis's teachings in the following two sentences:[19]

> **As per claim 25,** Abecassis further discloses displaying an on-screen signal with the rendered entertainment content, to indicate that an opportunity exists for the user to earn credit by viewing additional information (figure 12A and 12B).
>
> Abecassis does not explicitly disclose on-screen display to indicate to the user that credits can be earned by viewing additional information.

[18] Final Rejection, page 6, lines 2-3.
[19] Final Rejection, page 6.

Cited Figs. 12A and 12B do not teach an on-screen signal displayed with the rendered entertainment content. Nor do they teach indicating that an opportunity exists to earn credit by viewing additional information:

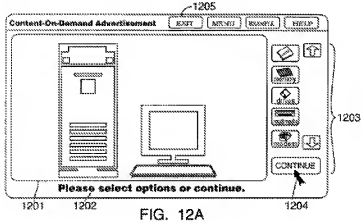

FIG. 12A

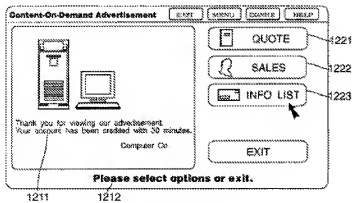

FIG. 12B

Jones is cited as teaching "an on-screen display to indicate to the user that credit can be earned by viewing additional information (column 2, lines 48-58)."[20] However, examination of the cited excerpt finds no such teaching.

Rather, the cited passage teaches that a user is alerted that a coupon is available. However, there is no requirement of "viewing additional information" in order for the coupon to be earned.

---

[20] Final Rejection, page 6.

Again, the rejection should be reversed.

VIII. CONCLUSION

The Board is requested to issue Findings of Fact consistent with the points above, and reverse the final rejections of the claims.

Respectfully submitted,

Date: July 20, 2009

DIGIMARC CORPORATION

CUSTOMER NUMBER 23735

Phone: 503-469-4800
FAX 503-469-4777

By /William Y. Conwell/
William Y. Conwell
Registration No. 31,943

IX. CLAIMS APPENDIX

1-4. (Canceled)

5. A method of video content delivery, including providing entertainment video content having a fingerprinted or digitally watermarked promotional message therein, the promotional message interrupting and separating the entertainment video content into first and second portions, and sensing the fingerprint or watermark of the promotional message when the promotional message is rendered at a user device, wherein if the promotional message is skipped over to more rapidly reach the second portion of the entertainment video content, the failed sensing of the fingerprint or watermark serves to change the terms under which the entertainment video content is provided.

6. The method of claim 5 in which the changed terms include assessing a charge for skipping the promotional message.

7. A method of entertainment video content delivery, including providing entertainment video content having plural fingerprinted or digitally watermarked promotional messages therein, and sensing same as the entertainment video content is rendered at a user device, wherein sensing of one or more of said fingerprinted or watermarked messages entitles a user to access other content or capabilities as a reward for the user having viewed one or more promotional messages in the entertainment video content.

8. (Canceled)

9. A method comprising:

receiving video content at a user device without paying a proprietor for the content;

rendering the video content for viewing;

detecting a fingerprint or digital watermark in the rendered video content; and

triggering a payment to said proprietor based on detection of the fingerprint or digital watermark during rendering;

wherein consideration for the viewing is triggered by the viewing itself, rather than in advance of the viewing.

10. A method comprising:

rendering video entertainment content to a user, the video entertainment content including promotional content integrated therein, rather than interrupting same;

receiving a signal from a user interaction device indicating selection of the promotional content during the rendering of said video entertainment content;

in response to said selection, providing to said user additional promotional information related to the selected promotional content; and

providing the user a reward for receiving said additional promotional information.

11. The method of claim 10 in which the reward includes promotional points redeemable for premiums.

12. The method of claim 10 in which said additional promotional information is provided to the user through a process that makes use of fingerprint or digital watermark information conveyed by said video content.

13-21. (Canceled)

22. The method of claim 10 in which said providing includes presenting linking options to the user, and receiving a user selection of one of said options.

23. The method of claim 22 in which said providing includes conveying data relating to the linking options by one of the group consisting of: digital watermarking, Multicast IP, vertical blanking interval signaling, and file header data.

24. The method of claim 10 in which the reward comprises a discount for a product promoted by said promotional content.

25. The method of claim 10 that includes displaying an on-screen signal with the rendered entertainment content, to indicate that an opportunity exists for the user to earn credit by viewing additional information.

X. EVIDENCE APPENDIX

None

XI. RELATED PROCEEDINGS APPENDIX

None